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IBM CORPORATION
3039 CORNWALLIS RD.
DEPT. T81 / B503, PO BOX 12195
REASEARCH TRIANGLE PARK, NC 27709

EXAMINER

KANG, INSUN

ART UNIT PAPER NUMBER

2124

DATE MAILED: 01/03/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/772,650

Applicant(s)

SLUIMAN, HARM

Examiner

Insun Kang

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the corresponding address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 August 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

1. This action is in response to the amendment filed 8/12/2004.
2. As per applicant's request, claim 4 has been amended. Claims 1-8 are pending in the application.

Specification

3. The objection to the specification has been withdrawn due to the amendment to the Specification.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1-8 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent 6,633,888 to Kobayashi.

The applied reference has a common assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

Per claim 1:

Kobayashi teaches:

- testing a software test component (i.e. "testing newly created component classes within the visual builder interface," in col 4 lines 62)
- ascertaining a public interface of the software test component (i.e. "once the interface of a bean is known, a programmer can create a new customized component from the base Java bean component," col 7 lines 31-45; see also col 8 lines 33-58; col 8 lines 33-58; col 8 lines 33-58)
- creating a wrapper component for the software test component (i.e. "a proxy component is created for each method, including constructors," abstract) by the substeps of defining a wrapper component interface to mirror the public interface of the software test component (i.e. "the parser/extractor 304 parses each constructor and each method and extracts any related fields, comments, and parameter names," col. 8 lines 46-58 ; "proxy component encapsulates the parameters of that method. In particular, parameters associated with a method are represented by properties of the proxy component created for that method," col 5 lines 1-9)
- defining the wrapper component to delegate to the software test component (i.e. "a proxy component is created for each method, including constructors," abstract ; "the bean compiler converts each component into proxy components," col 8 lines 8-19) by including calls to the public interface of the software test component within the wrapper component (i.e. "constructor and methods objects instantiated by the proxy beans 210

within bean-based application 216 to call the appropriate constructors and methods for the target class in the implementation code,” col. 9 lines 40-54 ; “the methods of proxy beans are invoked, they use the universal transport mechanism to invoke the actual component code in order to test the method,” col 22 lines 41-53; see also col 12 lines 18-25)

- inserting test code within the wrapper component to permit capture and playback of user interaction with the public interface of the software test component (i.e. “The proxy components can be manipulated ... Each composite component in the application can be tested...under control of the proxy components,” col 8 lines 8-32; col. 22 lines 54-67 and col. 23 lines 1-6)

- enabling a test case to use the wrapper component interface to access the software test component and to generate test data from the test code in the wrapper component (i.e. “when the methods of proxy beans are invoked, they use the universal transport mechanism to invoke the actual component code in order to test the method...the method parameters of the original bean are exposed by the proxy components created from the methods of that bean,” col 22 lines 46-53).

substantially as claimed.

Per claim 2:

The rejection of claim 1 is incorporated, and further, Kobayashi teaches:

- the software test component is an object-oriented software test component (i.e. “The beans to be tested,” col 22 lines 18-40)

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- interrogating a test component definition to determine public methods, constructor and associated parameters for the software test component (i.e. "the parser/extractor ... parses each constructor and each method and extracts any related fields, comments, and parameter name," col 8 lines 33-58)
as claimed.

Per claim 3:

The rejection of claim 2 is incorporated, and further, Kobayashi teaches:

-the test component is a Java language class (i.e. "The beans to be tested," col 22 lines 18-40)
- use of an introspection group of interfaces in a Java Bean specification (i.e. "the parser/extractor ... parses each constructor and each method and extracts any related fields, comments, and parameter name," col 8 lines 33-58)
as claimed.

Per claim 4:

The rejection of claim 2 is incorporated, and further, Kobayashi teaches:

- defining public methods, constructors and associated parameters in the wrapper component to mirror the public methods, constructors and parameters determined for the software test component (i.e. "Using the extracted constructor information, the compiler module creates and compiles a constructor bean such as beans and ... The compiler ... also creates a method bean from extracted information for each method in

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the class," col 8 lines 33-58; "a proxy component is created for each method, including constructors ...which proxy component encapsulates the parameters of that method. In particular, parameters associated with a method are represented by properties of the proxy component created for that method," col 5 lines 1-9) as claimed.

Per claim 5, this is the computer program product version of claim 1, respectively, and is rejected for the same reasons set forth in connection with the rejection of claim 1 above.

Per claims 6-8, they are the system versions of claims 1, 2 and 4, respectively, and are rejected for the same reasons set forth in connection with the rejection of claims 1, 2 and 4 above.

Response to Amendment

6. The amendment to the claims filed on 8/12/2004 does not comply with the requirements of 37 CFR 1.121(c) because: claims 1-3 and 5-8 were not previously added or amended in an earlier amendment paper. Therefore, the claim status identifier, "original" should be used.

Response to Arguments

7. Applicant's arguments filed 8/12/2004 have been fully considered but they are not persuasive.

Per claim 1:

The applicant simply states that Kobayashi does not disclose each limitation in the claim and fails to discuss the reference applied against the claim, specifically explaining how the claims avoid the reference or distinguish from it and to point out disagreements with the examiner's contentions. Instead, the applicant appears to map exact words to words in comparing the limitations in the instant claim 1 and the cited phrases of the Kobayashi reference.

The applicant emphasizes that a "wrapper component is defined to delegate to" something (i.e. software test component in this case) throughout the remark. The examiner points out that a wrapper in the **Java programming language** is an object that **encapsulates and delegates** to another object for altering its behavior or interface. This wrapper operates as a "proxy" for the actual component as acknowledged in the instant specification (page 10). The generation of this wrapper such as the limitations in the instant claim is possible though **Java language features in the Java Bean specification**. The instant specification also states that defining the wrapper component is possible by using tools such as the "introspection group of interfaces in the Java Bean specification." Such tools permit a wrapper generator to ascertain the members in the actual component to be used to define the proxy wrapper (page 10).

Therefore, it is evident that the present invention simply uses the existing Java language features in the Java Bean specification to create a wrapper component.

Kobayashi's proxy bean acts as a delegate to the API of the actual bean and Kobayashi uses the parsing/extracting mechanism to determine/describe (i.e. introspection) and obtain (i.e. reflection) information about the members of a class such as the properties, methods, and constructors (i.e. "the parser/extractor 304 parses each constructor and each method and extracts any related fields, comments, and parameter names," col. 8 lines 46-58). This extracting mechanism extends the conventional extraction process of "reflection" in the Java Bean specification so that the mechanism does not only determine the method parameters but also allows the "parameters to be converted to properties of the method bean created from the original method (col. 9 lines 1-19)." Using this extraction process (i.e. reflection), the APIs for all the classes can be retrieved and a proxy bean can be generated. Therefore, Kobayashi discloses the limitation, "wrapper is created having an interface to mirror the public interface of the software test component."

The proxy bean is a wrapper bean for a call to a Java object method or Java constructor (i.e. "a proxy component is created for each method, including constructors, in the component class code, which proxy component encapsulates the parameters of that method" abstract). Kobayashi discloses calls to the public interface of the actual bean (i.e. "constructor and methods objects instantiated by the proxy beans 210 within bean-based application 216 to call the appropriate constructors and methods for the target class in the implementation code," col. 9 lines 40-54). Therefore, Kobayashi

discloses that a wrapper component is defined to delegate to the software test component by including calls to the public interface of the software test component.

With a proxy, the code of existing classes need not be modified. The proxy class implements the same interface and uses a target object as a delegate. Kobayashi discloses, "the bean is checked to ascertain if it is operating properly. In some cases the result of the test can be ascertained visually...if the bean responds to an event by running a graphics image, the image should be displayed...In other cases property values must be checked...the operator may then choose to edit the bean...then proceeds ...to retest it (col. 22 lines 54-67 and col. 23 lines 1-6)." In order to generate the test result and check the property values, the need to add some type of test code is necessary to determine if the bean operates properly. Further, Kobayashi discloses, "once the proxy beans are constructed, they can be displayed, **manipulated and tested** by means of a bean tester (i.e. col. 17 lines 38-42)." Therefore, Kobayashi is capable of modifying the proxy bean in a specific way for a particular purpose. Accordingly, Kobayashi discloses inserting test code within the wrapper component to permit capture and playback of user interaction with the public interface of the software test component.

Kobayashi recites, "a user has a bean...proxy bean...the bean to be tested is loaded into the tester... the methods of proxy beans ...invoke the actual component code in order to test the method ...the method parameters of the original bean are exposed by the proxy components created from the methods of that bean. Consequently, each method can be tested fully (col. 22 lines 30-54)." Therefore, it is

clear that the tester uses the proxy bean to invoke the actual bean to be tested.

Accordingly, Kobayashi discloses enabling a test case to use the wrapper...in the wrapper component.

Kobayashi discloses the limitations in claim 1 in view of the broadest reasonable interpretation as shown above. Therefore, the rejection of claim 1 is considered proper and maintained.

Conclusion

8. THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.


9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Insun Kang whose telephone number is 571-272-3724. The examiner can normally be reached on M-F 9:30-6.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kakali Chaki can be reached on 571-272-3719. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

I. Kang
Patent Examiner
AU 2124


KAKALI CHAKI
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100